

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 10.24.2014

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Nitric Acid, 0.1M

SECTION 1 : Identification of the substance/mixture and of the supplier

Product name : Nitric Acid, 0.1M

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: S25859

Recommended uses of the product and uses restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific
9 Barnhart Drive, Hanover, PA 17331

Supplier Details:

Fisher Science Education
15 Jet View Drive, Rochester, NY 14624

Emergency telephone number:

Fisher Science Education Emergency Telephone No.: 800-535-5053

SECTION 2 : Hazards identification

Classification of the substance or mixture:



Irritant

Skin irritation, category 2

Skin corrosion/irritation - Skin Irritation 2

Signal word :Warning

Hazard statements:

Causes skin irritation

Precautionary statements:

If medical advice is needed, have product container or label at hand

Keep out of reach of children

Read label before use

Wash skin thoroughly after handling

Wear protective gloves/protective clothing/eye protection/face protection

Specific treatment (see supplemental first aid instructions on this label)

Take off contaminated clothing and wash before reuse

If skin irritation occurs: Get medical advice/attention

IF ON SKIN: Wash with soap and water

Other Non-GHS Classification:

WHMIS

D2B



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NFPA/HMIS



NFPA SCALE (0-4)

Health	2
Flammability	0
Physical Hazard	0
Personal Protection	X

HMIS RATINGS (0-4)

SECTION 3 : Composition/information on ingredients

Ingredients:		
CAS 7732-18-5	Deionized Water	90.05 %
CAS 7697-37-2	Nitric Acid, ACS	0.95 %
Percentages are by weight		

SECTION 4 : First aid measures

Description of first aid measures

After inhalation: Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Seek medical advice if discomfort or irritation persists.

After skin contact: Wash affected area with soap and water. Rinse or flush skin/hair gently with water for at least 20 minutes. Seek medical attention if irritation persists or if concerned

After eye contact: Protect unexposed eye. Remove contact lens(es) if able to do so during rinsing. Rinse or flush eye gently with water for at least 15-20 minutes, lifting upper and lower lids. Seek medical attention if irritation persists or if concerned

After swallowing: Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual drink sips of water. Seek medical attention if irritation, discomfort or vomiting persists.

Most important symptoms and effects, both acute and delayed:

Irritation- all routes of exposure. Headache, Shortness of breath. May cause gastrointestinal irritation with nausea, vomiting and diarrhea; Nitric acid vapors may lead pneumonia or pulmonary edema at prolonged exposure

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention, provide SDS document to physician.

SECTION 5 : Firefighting measures

Extinguishing media

Suitable extinguishing agents: If in laboratory setting, follow laboratory fire suppression procedures. Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition

For safety reasons unsuitable extinguishing agents:

Special hazards arising from the substance or mixture:

Combustion products may include carbon oxides or other toxic vapors.

Advice for firefighters:

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Protective equipment:

Additional information (precautions): Move product containers away from fire or keep cool with water spray as a protective measure, where feasible.

SECTION 6 : Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Wear protective equipment. Use respiratory protective device against the effects of fumes/dust/aerosol. Keep unprotected persons away. Ensure adequate ventilation. Keep away from ignition sources. Protect from heat. Stop the spill, if possible. Contain spilled material by diking or using inert absorbent. Transfer to a disposal or recovery container.

Environmental precautions:

Prevent from reaching drains, sewer or waterway. Collect contaminated soil for characterization per Section 13

Methods and material for containment and cleaning up:

If in a laboratory setting, follow Chemical Hygiene Plan procedures. Collect liquids using vacuum or by use of absorbents. Place into properly labeled containers for recovery or disposal. If necessary, use trained response staff/contractor. Neutralize with calcium carbonate and soda ash.

Reference to other sections:

SECTION 7 : Handling and storage

Precautions for safe handling:

Prevent formation of aerosols. Follow good hygiene procedures when handling chemical materials. Do not eat, drink, smoke, or use personal products when handling chemical substances. If in a laboratory setting, follow Chemical Hygiene Plan. Use only in well ventilated areas. Avoid splashes or spray in enclosed areas.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Provide ventilation for containers. Avoid storage near extreme heat, ignition sources or open flame. Store away from foodstuffs. Store away from oxidizing agents. Store in cool, dry conditions in well sealed containers. Keep container tightly sealed.

SECTION 8 : Exposure controls/personal protection



Control Parameters:

7697-37-2, Nitric acid, ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL) 4 ppm STEL
7697-37-2, Nitric acid, ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA) 2 ppm TWA
7697-37-2, Nitric acid, NIOSH - STEL 4 ppm; 10 mg/m³
7697-37-2, Nitric acid, NIOSH - TWA 2 ppm; 5 mg/m³
7697-37-2, Nitric acid, OSHA - Final PELs - Time Weighted Averages (TWAs) 2 ppm; 5 mg/m³

Appropriate Engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

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Respiratory protection:	Not required under normal conditions of use. Use suitable respiratory protective device when high concentrations are present. Use suitable respiratory protective device when aerosol or mist is formed. For spills, respiratory protection may be advisable.
Protection of skin:	The glove material has to be impermeable and resistant to the product/ the substance/ the preparation being used/handled. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.
Eye protection:	Safety glasses with side shields or goggles.
General hygienic measures:	The usual precautionary measures are to be adhered to when handling chemicals. Keep away from food, beverages and feed sources. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Do not inhale gases/fumes/dust/mist/vapor/aerosols. Avoid contact with the eyes and skin.

SECTION 9 : Physical and chemical properties

Appearance (physical state,color):	Clear, colorless liquid	Explosion limit lower: Explosion limit upper:	0 Vol % 0 Vol %
Odor:	Odorless	Vapor pressure:	2.3 kPa (@ 20°C) or 23 hPa (17 mm Hg) at 20 °C (68 °F)
Odor threshold:	Not determined	Vapor density:	0.62 (Air = 1)
pH-value:	7 [Neutral] (1% soln/water)	Relative density:	1 (Water = 1)
Melting/Freezing point:	0 °C (32 °F)	Solubilities:	
Boiling point/Boiling range:	100°C (212°F)	Partition coefficient (n-octanol/water):	Not determined
Flash point (closed cup):	Not applicable	Auto/Self-ignition temperature:	Not determined
Evaporation rate:	Not determined	Decomposition temperature:	Not determined
Flammability (solid,gaseous):	Not applicable	Viscosity:	a. Kinematic: Not determined b. Dynamic: 0.952 mPas at 20 °C (68 °F)
Density: 1 g/cm ³ (8.345 lbs/gal) at 20 °C (68 °F)			

SECTION 10 : Stability and reactivity

Reactivity:

Chemical stability: No decomposition if used and stored according to specifications.

Possible hazardous reactions:

Conditions to avoid: Store away from oxidizing agents, strong acids or bases.

Incompatible materials: Strong bases. Metallic powder

Hazardous decomposition products: Nitrogen oxides. Hydrogen nitrate

SECTION 11 : Toxicological information

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Acute Toxicity:		
Inhalation:	7697-37-2	LC50 Rat 67 ppm 4 h
Oral:	7697-37-2	LD50 oral-rat: 430mg/kg
Chronic Toxicity: No additional information.		
Corrosion Irritation:		
Dermal:	Section 2	Classified as Skin Irritant
Sensitization:		No additional information.
Single Target Organ (STOT):		No additional information.
Numerical Measures:		No additional information.
Carcinogenicity:		No additional information.
Mutagenicity:		No additional information.
Reproductive Toxicity:		No additional information.

SECTION 12 : Ecological information

Ecotoxicity Persistence and degradability: Readily degradable in the environment.

Bioaccumulative potential:

Mobility in soil: Aqueous solution has high mobility in soil.

Other adverse effects:

SECTION 13 : Disposal considerations

Waste disposal recommendations:

Product/containers must not be disposed together with household garbage. Do not allow product to reach sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Consult federal state/ provincial and local regulations regarding the proper disposal of waste material that may incorporate some amount of this product. Neutralize with calcium carbonate and soda ash.

SECTION 14 : Transport information

UN-Number

3264

UN proper shipping name

Corrosive Liquid, Acidic, Inorganic, N.O.S., (Nitric Acid Solution)

Transport hazard class(es)



Class:

8 Corrosive substances

Packing group:II

Environmental hazard:

Transport in bulk:

Special precautions for user:

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SECTION 15 : Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

Acute

SARA Section 313 (Specific toxic chemical listings):

7697-37-2 Nitric acid 1.0 % de minimis concentration

RCRA (hazardous waste code):

None of the ingredients is listed

TSCA (Toxic Substances Control Act):

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

7697-37-2 Nitric acid 1000 lbs

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients is listed

Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed

Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed

Chemicals known to cause developmental toxicity:

None of the ingredients is listed

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients is listed

Canadian NPRI Ingredient Disclosure list (limit 1%):

7697-37-2 Nitric acid

SECTION 16 : Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note: The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

GHS Full Text Phrases:

Abbreviations and acronyms:

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IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
CFR: Code of Federal Regulations (USA)
SARA: Superfund Amendments and Reauthorization Act (USA)
RCRA: Resource Conservation and Recovery Act (USA)
TSCA: Toxic Substances Control Act (USA)
NPRI: National Pollutant Release Inventory (Canada)
DOT: US Department of Transportation

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